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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,558	08/04/2003	Ralph H. Johnson	15436.434.3.1	6028

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EXAMINER	
NGUYEN, PHILLIP	
ART UNIT	**PAPER NUMBER**
2828	

DATE MAILED: 01/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/634,558	JOHNSON, RALPH H.	
	Examiner	Art Unit	
	Phillip Nguyen	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *18-24* is/are allowed.

6)☒ Claim(s) *1-8,11-15 and 25* is/are rejected.

7)☒ Claim(s) *9,10,16 and 17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Examiner has acknowledged that applicant has renumbered the claims with the suggestion in the previous Office Action. However, new claim 26 has been added but misnumbered. It should have been numbered 25 instead of 26 since claim 25 does not exist after renumbering. Therefore claim 26 has been renumbered to claim 25 in this Office Action.

Response to Arguments

2. Applicant's arguments with respect to claims 1-8 and 11-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 11-14 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Grodzinksi et al. ('809).

With respect to claim 1, Grodizksi discloses in Fig. 1-3 at an active layer 12 in a semiconductor light emitting device (col. 1, lines 15-19), the active layer comprising at least one

quantum well including layers of a semiconductor alloy 21, 22, 23 under mechanical stress interspersed with layers of stabilizing material 25 and 26 (col. 4, lines 7-20).

With respect to claims 2, 4, 12, since Grodzinksi dicloses the device is VCSEL.

With respect to claim 3, Grodzinksi discloses layers of stabilizing material 25 and 26 being nearly lattice matched to substrate used in the device, wherein the nearly lattice matched layers 25 and 26 serve as mechanical stabilizers for the layers of semiconductor alloy under mechanical stress to prevent them from relaxing.

With respect to claim 5, Grodzinksi discloses a multiple quantum wells in the active (col. 3, lines 13-15).

With respect to claims 6 and 13, Grodzinksi discloses the substrate material comprising GaAs (col. 3, col. 55-59).

With respect to claims 7 and 14, Grodzinksi discloses the layers of semiconductor alloy include InGaAs (col. 4, lines 7-8).

With respect to claim 11, Grodzinksi discloses the claimed invention as shown in the rejections of claims 1 and 3.

With respect to claim 26, Grodzinksi discloses the stabilizing material comprising GaAs (col. 4, lines 8-9).

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-8 and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Salokatve et al. ('293).

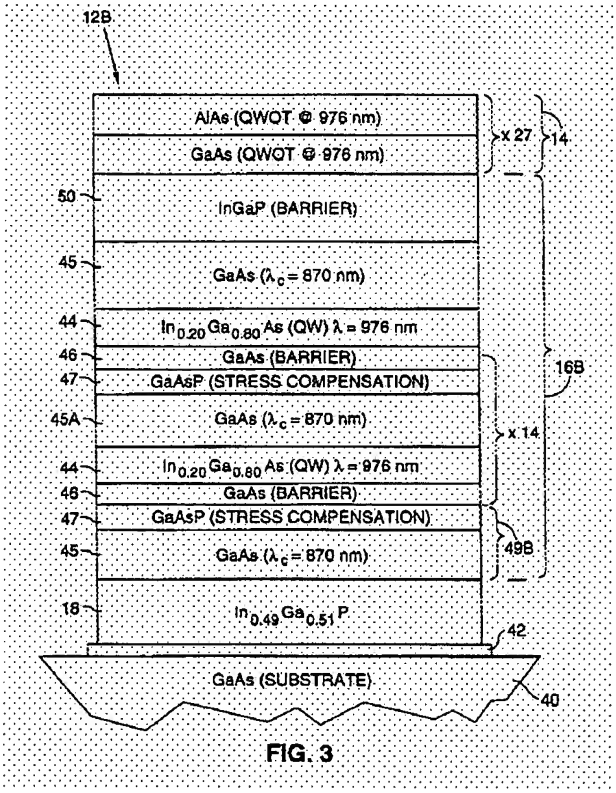

FIG. 3

With respect to claims 1, 6 and 13, Saloketve discloses in Fig. 3 (above) an active layer in a semiconductor light emitting device, the active layer comprising at least one quantum well including layers of a semiconductor alloy 44 under mechanical stress (since it is disposed on GaAs substrate 40) interspersed with layers of stabilizing material 47.

With respect to claims 2 and 12, Saloketve discloses said device being VCSEL.

With respect to claim 3, Saloketve discloses the claimed invention (see col. 8, lines 5-23 about the stress compensation layers).

With respect to claim 5, Saloketve discloses multiple quantum wells (col. 6, lines 13-18).

With respect to claims 7 and 14, Saloketve discloses the semiconductor alloy layers including InGaAs.

With respect to claims 8 and 15, Saloketve discloses the plurality of quantum wells being bout 80A-250A (col. 5, lines 65-67 and col. 6, lines 1-2) where the quantum wells including well layer, barrier layer and stress compensation layer. The total thickness is about 7.0 nm (well) + 5.0 (barrier) + 70 (stress compensation) = 190 A.

With respect to claim 11, Saloketve discloses the claimed invention as shown in the rejections of claims 1 combining with claim 3.

Allowable Subject Matter

5. Claims 9-10 and 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18-24 are allowed because the prior art fails to teach or fairly suggest said device with the stabilizing material layers being about 9.5 to 11.2 A thick. The prior art also fails to teach the stabilizing material layers being intespersed with the quantum well layers, and the barrier layers sandwiching the active layer.

Communication Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Nguyen whose telephone number is 571-272-1947. The examiner can normally be reached on 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY, can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAMES MOFFET

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